



A MAGAZINE FOR ARMOR ENTHUSIASTS
Volume 2 Number 3 June 1970



The AFV-G2 is a magazine, published monthly, for Armor Enthusiasts, with the purpose of gathering and disseminating information about Armored Fighting Vehicles and their employment; to provide an opportunity for persons seriously interested in the History of Armored Fighting Vehicles, in the modeling of these AFV's and associated equipment, and in the playing of military Wargames utilizing miniature AFV's, to share ideas and items of mutual interest, and to promote an interest and awareness in the subject of AFV's.

The AFV-G2 is available, with an individual issue price of \$.60, from local Hobby Shops, Magazine and Book Dealers. Subscriptions are available for the sum of \$6.00 yearly. Checks should be made payable to the "AFV-G2" or to Baron Publishing Company, and forwarded to the Circulation Director: Mr. John Yonos, 4829 Coldwater Canyon, Sherman Oaks, California 91403.

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COVER: Judging from reader comments, the Panzerkampfwagen VI. "Tiger I." is without a doubt one of the most popular tanks of World War II. Our cover illustration for this month is a pen-and-ink rendering of the Tiger tank by Norb Meyer. His illustration shows off the massive power and square lines of this heavy tank, and illustrates this month's Color 'n Camouflage article on the Tiger tanks in Tunisia.

ARMoured FORMATIONS OF THE BRITISH ARMY

2nd Armoured Division - 1940-1941

by Bill Platz



2ND ARMoured DIVISION 1940-41

WHITE KNIGHTS HEL-
MET ON RED BACKGROUND

Part of the joint British-French plans in the event of war called for the British to provide two Armoured Divisions for operations on the continent. However, at the time these plans were made in 1938, the three proposed armoured divisions of the British Army were still far from being operational units. In Egypt, what was to become the 7th Armoured was beginning to take shape, and the 1st Armoured in England was in the process of organization, though it still lacked most of its tanks. The 2nd Armoured Division existed only on paper.

It was not until January 1940 that the division began to form under its first commander, Major General Hotback. When formed, the Division was to consist of a Heavy Brigade, a Light Brigade and a Support Group of artillery, infantry and engineers; however, all available cruiser tanks were required for the 1st Armoured Division, prepar-

ing to leave for France, and thus only the Light Brigade of the 2nd was operational until the fall of 1940. The 22nd Heavy Armoured Brigade was without tanks or training.

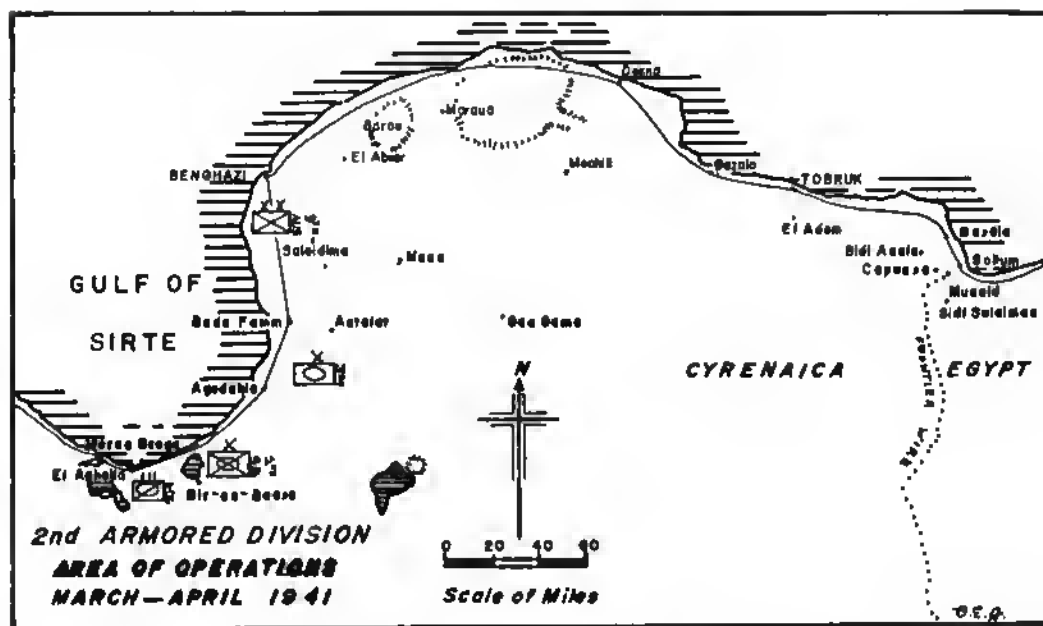
After Dunkirk, the 2nd Armoured Division was the only armoured formation remaining in Europe, and the 150 Mark VI. light tanks of its 1st Armoured Brigade, consisting of 3rd Hussars, 4th Hussars, and the King's Dragoon Guards (or K.D.G.), were scattered throughout Southern England.

During the autumn of 1940, the division received a new Brigade to replace the 22nd, and a new Commanding General. Major General J. Tilly found his new division in a sorry state. The 3rd Armoured Brigade had been transferred from the 1st Armoured Division after the fall of France, however two of the six Tank Regiments had been dispatched to the Middle East, to reinforce the 7th Armoured Division, and a third had been converted to armoured cars. (In September 1940, 3rd Hussars and 2nd Battalion, Royal Tank Regiment, equipped with Mark VI. light and A-9 Cruiser tanks, respectively, were sent to Egypt to support Wavell's coming offensive.) The remaining units had no opportunity to train together as a division; but, nevertheless, they were also sent around the Cape to Egypt, where they arrived in January 1941.

It was unfortunate for 2nd Armoured Division that it arrived in a theater of operation where the commanding general was trying to conduct operations on three different continents simultaneously. The 7th Armoured Division was heavily engaged in the Western Desert, and would soon need a refit; the Italians in Eritrea threatened the East African Colonies; the Vichy French in Syria formed a base for Axis operations in Iraq; and there was a growing crisis in Greece. On February 3, 1941, while the Italians were withdrawing from Benghazi to Beda Fomm, 2nd Armoured was moving into the desert with two regiments of Cruisers (5th RTR and 3rd RTR) to be followed later by the light tank regiments and the division headquarters. By mid-February, however, priorities had changed, and now the division had to provide 1st Armoured Brigade Group for an expected move into Greece, while the Support Group and 3rd Armoured Brigade remained to guard the newly conquered territories in Africa.

On February 28, 1941, while 1st Armoured Brigade was put on 48-hour alert for movement to Greece, 3rd Armoured Brigade was taking up positions in El Aghella Gap. Having relieved the 7th Armoured Division in February, this Brigade, along with the division's Support Group, became the only British troops facing the Axis forces in North Africa. The 9th Australian Division, also newly arrived in the desert and short of transport, was in supporting positions in the Benghazi area, but was in no condition to move forward. One week before, armoured cars of the K.D.G. had made contact with their opposite numbers in the 5. Leichte-Division, DAK, and had sent back the word "The Germans are in Africa"; but, even this could not deter the British from the coming expedition to Greece. (The Axis High Command also believed that no offensive could be launched prior to May 1941.)

During March 1941, the 2nd Armoured continued to hold the front line against increasing Axis forces in the desert, while half of its strength crossed the Mediterranean. Outposts were established by the Armoured Car Regiment at El Aghella, while the Support Group deployed in defensive positions extending inland from Mersa Brega. 3rd Armoured Brigade patrolled a sec-



tor to the south of the Support Group, but returned each night to leaguer in the hills near Agedabia, a distance of 30 miles from their patrol area. Further to the rear, the division workshops and supply troops were based at Msus. When they relieved the 7th Armoured, the division picked up three regiments, the 3rd Hussars and 6th Royal Tanks to replace the two units transferred to the 7th, and the 1st Royal Horse Artillery, since most of the division's artillery had been sent to Greece. (On February 6, 1941, the British had captured 112 Italian M-13/40 Medium tanks at Beda Fromm. These vehicles were in various stages of disrepair, and the best of them were overhauled, equipped with British radios, and issued to the 6th RTR to replace earlier losses. The light tanks of the 3rd Hussars were also supplemented by equipping "C" Squadron with M-13 tanks as they became available.)

On the 23rd, the Germans attacked the outpost at El Agheila, and forced the British back. Then on the last day of March 1941, Rommel began his first offensive. At 0950 of the 31st, the Aufklärungs-Abteilung 3, DAK and the armoured cars of the K.D.G. exchanged the first shots of the battle of Mersa Brega, and the German units, supported by Stukas, continued to attack throughout the day. Late in the afternoon, they breached the 2nd Armoured's defense line. That night, the Support Group withdrew to Agedabia, followed by the Armoured Brigade. The German original objectives had now been reached, but the weakened British offered an irresistible temptation. The German advance continued.

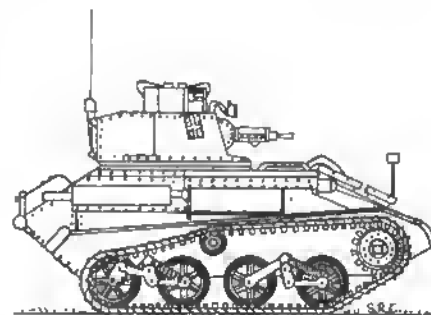
Major General Gambier-Parry, commanding the 2nd Armoured, had no choice but to continue his withdrawal. 5th RTR had only 23 operational tanks when the battle started, and had since sustained losses; the light tanks of the 3rd Hussars, armed with a .50 caliber MG, were ineffective against hostile tanks; and the 6th RTR's M-13/40's were hampered by the lack of adequate radio equipment and diesel fuel. Nevertheless, the Support Group attempted to hold Agedabia on April 2nd, while 3rd Armoured Brigade withdrew to the northeast. The bulk of the group's AT had gone with the 1st Armoured Brigade, and the 25-pound field guns were pressed into the Anti tank role, but even they were unable to stop the Germans, who forced their way into the town on the evening of the 2nd. The Support Group withdrew, badly-mauled, to join the 9th Australian Division outside Benghazi. The next day, Brigadier Rimington requested permission to launch a counterattack with 3rd Armoured Brigade, but this was denied by higher authority on the grounds that no tank replacements were available. The Brigade then moved northeast, taking up positions that would place them on the flank of any advance towards Benghazi or across the desert.

Plans were changed, however, on the morning of April 4th. The necessity to supply two widely separated Brigade Groups had overtaxed the division's transport. This coupled with wear and tear caused by the rough terrain, resulted in a severe shortage of motor transport, which

in turn required that the normally mobile supply echelons be tied to the large Forward Supply Depots at Msus and Mechili. This was a handicap that was to prove fatal.

The Germans spent April 3rd bringing up supplies and sending out reconnaissance patrols, while the British tried to sort themselves out. The tank strength of 3rd Armoured Brigade had been reduced to twelve A-13 Cruisers, twenty-six M-13/40 Mediums and eighteen Mark VI. Lights, mostly as a result of mechanical breakdowns, by the morning of April 3rd. At noon, the HQ of 5th RTR received orders to move south, and attack a hostile force near Antelat. This turned out to be the M-13/40's of the 6th Tanks, an understandable mistake. A later air reconnaissance report was to have more dire consequences. At 1830, a force of "...a hundred tanks together with motor transport" was sighted moving against Msus, and the garrison fired the fuel dumps. The next morning when the tanks of the 3rd Armoured Brigade arrived to refuel, they were greeted by columns of black smoke. "From now onwards, the movements of the 3rd Armoured Brigade were almost entirely dictated by the lack of petrol." (Field Marshall Sir Archibald Wavell in his dispatch.) The supposed tank attack was actually a patrol of the Long Range Desert Group and the Recovery Section of the 3rd Armoured Brigade looking for damaged tanks to salvage. It had not been a good day for the RAF Recon Squadrons.

While the tank regiments were maneuvering in the desert, Divisional HQ and the remnants of the Support Group withdrew with the two Australian Brigades along the coast road. New positions were to be taken up between Derna on the coast road and the supply base at Mechili, and 2nd Armoured was ordered to join the 3rd Indian Motor Brigade. It had gathered its remaining tanks and was pushing northwards to the coast near Derna, intending to move from there to Mechili via the coast road. The morning of the 6th, however, brought new disasters. German patrols were reported to the east of the Brigade, forcing them to continue due north, rather than northeast; the Corps Commander, General Neame, along with General O'Conner, was captured by an Axis patrol; and the division's CG, Gambier-Parry was surrounded in Mechili by leading elements of the 5th Light. But for 3rd Armoured Brigade, things were looking up. That day, they reached the coast at Maraua, just west of Derna, and found a fuel dump intact! On the 7th, the Brigade moved east through Derna to the main British positions, although by now it consisted only of dismounted tank crews and support personnel riding on supply lorries. Most of the column had passed through when the Germans arrived and captured the town along with Brigadier Rimington; but the rearguard with the last 7 tanks were cut-off. Lt. Col. Drew of the 5th RTR, commanding the rearguard, arrived at the pass leading out of Derna to find it held by Kampfgruppe Ponath, consisting of the 8th Machine Gun Battalion of Lt. Col. Ponath and several armoured cars. The British force attacked and four A-13's made it to the top of the pass where they occupied the Germans long enough to allow the remainder of the column to escape to Tobruk. Later that afternoon, the 5th RTR's "B" Echelon, which had become separated from the rest of the battalion, passed through Derna and climbed the pass where they came under fire from the Ponath group, but they were able to slip past, covered by a hail of Bren gun fire. This was the last unit west of Derna, and they arrived safely at Tobruk the next day.



Meanwhile, at Mechili the ring was growing together around Divisional HQ. Gambier-Parry had received orders to break out to the east on the afternoon of the 7th, but had decided to wait until the next morning in the hope of linking up with 3rd Armoured Brigade, which he believed was still in the desert to the southwest. (Actually the remnants of the 3rd had just forced their way through the pass at Derna, but communications at this point were almost non-existent.) By the morning of the 8th, the only units that had arrived belonged to the 5th Light and the chance for a major break-out had passed. Although the Germans had only light forces surrounding Mechili (the bulk of the Panzer-Regiment had gotten lost in the desert and did not arrive until the action had been decided), the Indian Brigade had almost no Anti-tank weapons and limited artillery with which to oppose an attack. Several attempts were made to break-out to Tobruk, but these were largely unsuccessful, although one group of some sixty vehicles did manage to escape. The Division HQ with Major General Gambier-Parry were "put in the bag". After one week, the 2nd Armoured Division had ceased to exist as a formation; the Corps Commander, the Division

Continued on Page 7

BOCAGE

Part III. SPECIAL RULES & ARTILLERY by Bruce Weigle

While the armor has been battling among the hedgerows for the past two months, the gunners to the rear have not been idle. Every other turn, the German player calls in his heavy artillery to provide support. He may then fire two shots at targets that his units have already spotted. The big guns have a 1-1/2 inch blast radius, and are aimed by giving the coordinates of the target in feet and inches from two edges of the playing board. The aiming, however, is done on the turn before the guns are fired.

Any infantry within the blast area are dead, and any vehicle is immobilized. Firing for the British is done in the same way, except that they get three shots every third turn. Mortars are fired the same way as tank guns, but they have a maximum range of 25 inches. Each side may have one or two mortars, depending on whether an odd or an even number is rolled when the original equipment was determined. Mortars have a 3/4 inch blast radius.

Infantry firefights: Infantry units engage each other by determining the number of possible hits for their weapons, and then rolling a die to determine if those hits are to count. The effectiveness of each side's weapons is given as a number of hits possible. This is determined as follows:

For each Machine Gun: Throw the die once and record the score as hits.

For each Sub-machine Gun: Throw the die and divide the score in half for the number of hits, rounding-off to the higher number.

For the total number of riflemen, throw one die, and consult the table given below.

Now that you have discovered how many casualties you may have inflicted on your luckless foe, the die is rolled once again. If the bad guys are in the open, then a roll of 1, 2, 3, or 4 results in their elimination (up to the maximum number of hits possible determined from the previous rolls); however, if the "blighters" are under cover, then a roll of 1, 2, or 3 is needed. If the targets are within 8 inches, then the number of hits are doubled.

Rocket Launcher Weapons: The enemy's tanks are likely subjects for the attention of brave rocket launcher crews; so there is a chance for some lucky German to win the Knight's Cross by "doing-in" a couple of Shermans. See the table listed below for the die rolls required.

Aircraft Rules: The judge, at the end of the German player's turn, rolls the die to see if an Allied plane is in the vicinity; a roll of 6 means that the aircraft appears this turn, while a roll of 5 means that it won't arrive until the next turn (so the German had better get all the vehicles that he can out of sight). Vehicles are safe from air attack only if concealed in groves, not in hedgerows. The type of attacking aircraft is determined by another die roll - an odd number indicates a fighter, while an even number indicates an observation plane. The fighter may take 2 passes at any German vehicle visible, using the following chart:

Roll:	1	MISS, bomb lands 4 inches below the target.
	2	MISS, bomb lands 6 inches left of target.
	3 & 4	HIT, bomb lands on target (WHAM!!!!)
	5	MISS, bomb lands 8 inches above target.
	6	MISS, bomb lands 4 inches right of target.



Observation planes can disclose the positions of three German vehicles each turn that they are over the battlefield, but they cannot attack.

To defend themselves against aircraft, the Germans have their "Wirbelwind" Flakpanzers, which can shoot down the intruders before they can attack; all this with a die roll of 6.

INFANTRY HIT TABLE

		NUMBER OF RIFLEMEN FIRING															
		1	2	3	4	5	6	7	8	9	10	15	20	25	30	35	40
SINGLE DIE SCORE	1									1	1	2	4	5	6	7	9
	2				1	1	1	1	1	1	2	3	5	6	7	9	10
	3			1	1	1	1	2	2	2	4	5	7	10	11	13	15
	4		1	1	1	1	2	2	2	4	5	7	9	11	13	15	19
	5	1	1	1	2	2	2	3	3	5	7	9	10	13	15	17	20
	6	1	2	3	3	4	4	5	6	6	8	10	12	14	16	18	22

ROCKET LAUNCHER HIT TABLE

Weapon Type	Range	Die Roll	Range	Die Roll
US Bazooka	Under 6"	4, 5, 6	6" to 12"	5, 6
German Panzerfaust	Under 6"	5, 6	6" to 12"	6
Ger. Panzerschreck	Under 6"	4, 5, 6	6" to 12"	5, 6

All weapons at ranges under 1 inch obtain hits with die rolls of 2, 3, 4, or 5

PRODUCT REVIEW:

Tamiya 1:35 Scale "Tiger I."

by Norb Meyer



To say that I was disappointed would put it mildly! After building the 1:25 scale version of the Tiger I., it would be fair to say that I was spoiled, but it does seem a pity that Tamiya could not scale down the larger Tiger model. If the car models can come in the "Beginner", "Intermediate" and "Experienced" categories, why not "Tank Kits"?

Tamiya, unfortunately, skimped on some details that should have been done in greater detail. For example, the hinge on the Commander's Hatch is just one big "GLOB" of plastic, instead of the fine detail that is on its "big brother". To make matters worse, Tamiya has cast a lot of the details in a wierd sort of plastic that does not take glue well. The plastic is flexible; I might add that it also does not take to carving or sanding, much less to hold paint.

The hatch covers on the Driver's and Radio Operator's compartments do not seat properly. The top portion of the hull has a lip that, supposedly, the hatches are to fit into snugly. That, we suppose, is the theory. In practice, the hatches don't fit, even with "considerable force". The track mounting cable on the Driver's side of the hull is cast onto the hull side, instead of being an add-on detail, as it should be. Of course, Tamiya has seen fit to cast in the texture of armor onto the side also, so that one does not dare try to sand off the cable and replace it. Oh, we are not against the "texturing", far from it.

I suppose one must be somewhat kind to Tamiya, after all, they have done a lot for our hobby. If it wasn't for Tamiya, we would all be modeling airplanes, I suppose. The Tiger I. track is excellent, and so is the running gear. Much of the add-on detail is good; what there is of it. Some of it is a little "gross", for example, the smoke dischargers are much too thick. The braces for these dischargers are also too thick, but with work they can be made to look good. Incidentally, the tow cables are cast in the "flexible" plastic, and at first glance, one thinks that the die cutter must have had too much 'Saki'; but they do bend.

All-in-all, it's a good kit to start from, and it's worth the price. It won't just go together from the box, though. It will need some extra work, and it could be classed in the "Intermediate" class of kit.

British 2nd Armoured Division - Continued from Page 5

Commander and the Armoured Brigade Commander were all prisoners. The entire tank strength of the division was gone, remaining scattered across Cyrenaica, more victims of empty petrol tanks than of German guns. Those survivors not caught by Axis patrols found their way back into Tobruk; but, after April 8th, 1941, the 2nd Armoured Division consisted only of those units that had been sent to Greece with the 1st Armoured Brigade Group. On May 10, 1941, the 2nd Armoured Division was officially disbanded.

Color 'n Camouflage

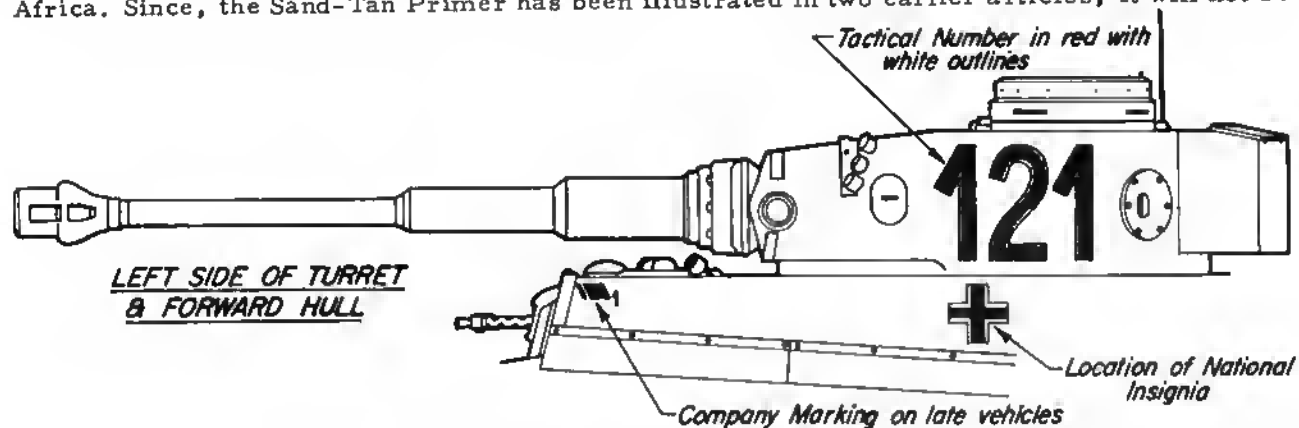
by Norb Meyer & Jim Steuard

The Panzerkampfwagen VI. "Tiger" in Tunisia

The first Tiger I., or more correctly, the Panzerkampfwagen VI. tanks, arrived in Tunis, the principal harbor of Tunisia, on November 29, 1942. They arrived in company with elements of the 10. Panzer-Division and the Italian "Supurga" Division, arriving as badly needed reinforcements for the German and Italian defenders who were battling British, French, and American forces. These Tiger tanks belonged to schwere-Panzer-Abteilung 501. (or Heavy Tank Battalion 501), the first separate battalion formed with these heavy, powerful tanks. Three of these Tigers were unloaded from ships on the 29th, and more were to follow in the next days. The tanks were in combat three days later in the fierce fighting at Tebourba, where the tanks of the 10. Panzer-Division and 1. Kompanie, s. Pz. Abt. 501 were decisive in giving the Allies their first substantial defeat. The Germans at Tebourba faced the British 11th Infantry Brigade and Gombat Command B of the American 1st Armored Division, and both of these units suffered considerable losses in men and material.

The first vehicles of the battalion to arrive came from the 1. Kompanie of the Abteilung; which was commanded by Hauptmann (or Captain) von Nolde, who was killed in the fighting at Tebourba. Most of the vehicles assigned to the battalion never arrived in Africa; they were in ships that were sunk by aircraft of the RAF or USAAG, or submarines of the Royal Navy. Thus, only the 1. Kompanie was to arrive and be used in Tunisia, due to a shortage of tanks.

There were two distinctly different sets of markings used on the Tiger I. tanks that served in North Africa. First, there were the markings that had been painted on the tanks of the battalion at Fallingbomel, Germany where the unit was formed and trained. Secondly, there were the markings applied in North Africa to the replacement vehicles that somehow survived the trip from Italy to Tunis. In this article, we will illustrate both sets of markings. The overall paint finish that was applied to all tanks in Tunisia was the Sand-Tan Primer paint that has been described in the April 1970 issue of AFV-G2. The Tigers were not painted in the Desert Sand popularly used by the Deutsches-Afrikakorps (or DAK). The terrain in Tunisia differed from the sand of the desert, and there had not been time to repaint the tanks when s. Pz. Abt. 501. was alerted for movement to Africa. Since, the Sand-Tan Primer has been illustrated in two earlier articles, it will not be re-



peated here. All Tigers were left in the original Sand-Tan; there does not appear to have been any other overspray of other colors on the tanks in an effort to provide better concealment.

The vehicles that were initially off-loaded at Tunis carried only the typical German Turret Identification Numbers as a form of identification within the unit itself. There were no unit tactical markings applied at this period of time. The Turret Identification Numbers followed the standard German Army pattern of the period; they consisted of three digits, the first number identified the company, the second identified the platoon within the company, and the third digit identified the individual vehicle within the platoon. These numbers were painted in red, outlined in white to provide limited visibility at night. The actual shade of red was not pure; there was a small amount of black added in order to cut the brightness of the color. In our paint chip for this month, we are

illustrating the exact shade of red used by the Wehrmacht for Turret Identification Numbers. The style of numbers is shown in the side view drawing on the preceding page. Examples of actual numbers used are: 111 (Platoon Leader of 1st Platoon), 121 (Platoon Leader of 2nd Platoon), 142 (Second vehicle of 4th Platoon) and others. In actuality, the numbers on the turrets did not assume any particular significance, as there was a surplus of Tiger crews, and the personnel with the most experience were chosen to fight at Tebourba, where all tanks were commanded by officers above the rank of Oberleutnant (1st Lieutenant). With all Turret Identification Numbers meaningless, they were deleted, being replaced by a simpler form of identification.

The second form of markings applied to Tiger tanks in Tunisia consisted of two separate markings applied to the hull of the tanks. The company within the battalion was identified by a small white rhombic symbol which was applied to both sides of the hull at the very front, near the Driver's and Radio Operator's compartments, as illustrated in the side view. The actual rhombic was as illustrated below, with a small bar to the left to identify the size of the unit, and the number "1" to identify the 1. Kompanie. This marking is a modification of the

Company Marking in White



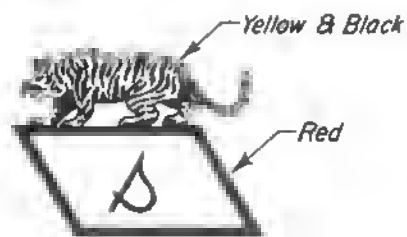
standard German Army map symbol for a tank unit. Schwere-Panzer-Abteilung 501., shortly after its arrival in Tunisia, chose a tactical symbol to identify the tanks of the battalion. This symbol appears on both Tigers that are on display at Aberdeen Proving Ground, and at Bovington, England; both of these vehicles were captured in Tunisia at the termination of fighting in May 1943. This tactical symbol consists of a small rhombic in red outline, with the letter 's' in written form in the inside of the rhombic. The rhombic, as already explained, indicated a tank unit, while the letter 's' stood for "Schwere" or Heavy. There was a small yellow and black Tiger crouched on the top of the red rhombic, as if he was snarling at an enemy. Examples of this symbol are provided by Tamiya in their 1:25 and 1:35 scale Tiger tank kits, and this marking is illustrated below. The marking appeared on the hull front plate of the Tiger tank in two slightly different locations, either above the driver's visor or slightly to the left of this visor and centered on the front plate. The actual location is shown in the sketch of the hull front plate below. In addition to the above markings, both examples of Tigers carried a national identity marking, consisting of a black and white cross on both sides of the hull as illustrated in the side view. Where tow cables were carried, the cross was under these cables. The cross also appeared on the upper left corner of the hull rear, along with an example of the company marking, on at least one example appearing in a photo.

There were not many Tigers in Tunisia, as the shipping losses were high. Some sources indicate that the total of the Abteilung did not exceed 19 to 20 tanks; another source gives 30 tanks as the maximum number. While confusion exists, the first figure of 19 tanks as the total would seem to be more accurate. It can also be conceded that a number of these tanks were being repaired in shops in Tunisia at any given time, since the transmission and engine of these "new" tanks gave considerable trouble.

Following the action at Tebourba, the company of Tigers, with tanks of 10. and 21. Panzer-Divisionen, were involved in the operation that the Germans coded "Spring Wind". This was an attack by 5. Panzer-Armee into the Fald Pass area. It began on February 14, 1943 and continued for three to four days until the allied defense strengthened. Combat Commands A and C of the American 1st Armored Division suffered quite heavy losses at Sbeitla. This, of course, was the battle better known to Americans as Kasserine Pass.

On February 26, 1943, another German offensive was launched by elements of 5. Panzer-Armee, again with less than complete success. This was Operation "Oxhead" and a number of the Tigers of 1. /schwere Panzer-Abteilung 501. were employed as an armored spearhead in the forefront of the attack. After initial success, the attack soon bogged down when the spring rains

INSIGNIA RED
30 pts Floquil DH10 Red
1 pt Floquil RR13 Gri-
my Black



Tactical Symbol -
schwere Panzer-Abteilung 501.

Continued on Page 27



PRODUCT REVIEW: Letraset Dry-Transfer Model Decals

by Jim Steuard

Letraset is a company primarily producing "dry-transfer" lettering used in art work and drafting. Recently, they have entered the model field, first with aircraft "decals" and now with four sheets of German vehicle markings. The product is not really a "decal", because no water is used; the marking is "burnished" or rubbed onto the painted surface of the model. This method of application has several advantages; there is no shiny thick decal film at the edges to be trimmed or hidden with paint, and the insignia will fit over rivets or surface edges much better than the usual thick decal. This method of application is much superior to regular decals, and I recommend this product on this basis.

Unfortunately, the content of the four insignia sheets leaves much to be desired. This is an area where ones past errors can return to haunt you. The artist for the Letraset sheets, Mr. Alan Breeze, obviously copied his artwork from the articles that I authored on German tactical insignia in AFV News, copying intact several of my errors, and adding a number of his own. Lets take a look at each sheet of the four in turn:

Sheet A1, SS-Panzer-Division Insignia: This sheet includes the markings for the Waffen-SS divisions numbered 1, 2, 3, 5, 8, 9, 10, 12, and 22. For some reason not explained, the sheet includes the markings for two SS-Kavalerie-Divisionen, even though both included no armored equipment. The marking described as that of the 1.SS-Panzer-Korps is incorrect, and shows the insignia of the 1.SS-Panzer-Division instead. The marking identified as that of the 1.SS-Panzer-Division is of the much earlier Infanterie-Division (mot.), when in Greece. The tactical marking of 2.SS-Panzer-Division "Das Reich", while close, is also incorrect. The shields for both the 1.SS-Panzer- and 12.SS-Panzer-Divisionen are much too "squashed" in shape to be accurate. All-in-all, a rather poor effort.

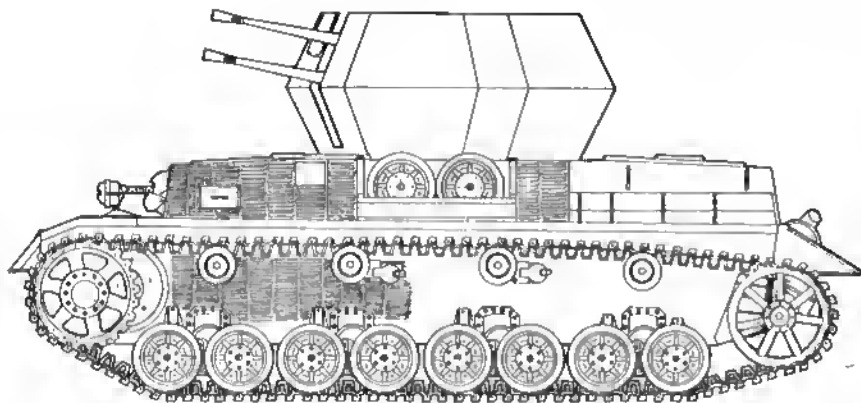
Sheets A2 and A3, German Armoured Division Unit Insignia: This sheet, along with A4, gives various small unit markings in yellow, and Army divisional markings for all Panzer-Divisions. None of the small unit markings are identified with captions, limiting their usage to the modelers who "know" these markings. The markings for both Panzer-Lehr-Division and Division "Hermann Göring" are too large and out of scale. Panzer-Grenadier-Division "Hermann Göring" should really read "Panzer-Division...." There are no black letters "RO" provided to complete the Regimental markings for tanks; also it seems too bad that the more common red insert numbers are not provided for tank tactical numbers.

Sheet A4, German Armoured Unit Insignia: This sheet includes nicely done wheeled vehicle license plates, even though Letraset has seen to include only three different numbers. This makes for a good many models, all carrying the incorrect "WH 126945" or "WL 257930".

Altogether, the sheets are nicely printed, they go on the model easily, when a little care is exercised. They look nice. It's too bad that very limited research and effort went into the pre-production stages. But they look nice on the vehicle, which is what counts???

Building the Monogram Flakpanzer IV.

by Graham Reynolds



Monogram's Flakpanzer IV. is well done by kit standards, although it does lack a few minor details. The parts are well molded, and they go together easily with very little flash to be trimmed. The suspension is superb and fits together with minimum effort. The vehicle hull is also well done, however, there are a few areas of poor fit. The spare track storage on the hull front plate is acceptable, but the tow cable pins are not included in the kit. This can be remedied

with a pin-vise and a little wire. Next, the Bow Machine Gun is under scale, but this will do unless you want absolute accuracy. If you do, then use an H&R MG34 machine gun, and cut the barrel jacket at the correct length before installation in the ball mounting. The hinge detail on the fenders of the kit is rather "crude" in its casting. This detail could be sanded off and reapplied for absolute accuracy. The Driver's and Radio Operator's hatches are well done and can easily be made to work, although they are a bit thick. The grill work on the rear deck of the vehicle is accurate, although the air intakes on the sides of the rear hull are covered with plates. These coverings are "legal" for late "Ausführung H and J" versions. If an earlier model is required, then these plates have to be removed and the correct detail added. To be correct in modeling a Flakpanzer IV., you should sand-off the gun cleaning rods from the left side of the hull. The cleaning rods for the 20mm anti-aircraft guns were much smaller than 75mm; these can be modeled from pieces of stiff wire and tied on the hull side with small wire clips, or a tube style container can be made from plastic or brass tubing. This tube style container was carried on the late versions on the rear decking. The only other detail lacking on the rear deck is a tow cable storage clamp. In addition, the towing pintle should be built-up, and using some wire, the proper pin could be installed in the pintle.

The turret, 20mm guns, and gun mount, including the sights, have been well researched. The gun barrels should be drilled out, but better still, the flash hider cones could be cut off, to be replaced by sheet plastic cones of proper thickness, after the barrels have been drilled. The interior of the turret does look a bit empty, but this can easily be remedied by the addition of a few H&R products, such as a Gas Mask container or two, one or more canteens, a couple of Hand Grenades, and maybe a Binocular Case hanging from the turret wall on clips. Since each vehicle was equipped with an extra MP-40; this gun and some spare magazine pouches can be supplied from the arsenal of H&R. There are four extra pieces of track, plus two German helmets provided in the kit. These can be supplemented by other H&R products, such as a Pick, a Shovel, some spare Gas Cans (Jerry cans...Ed.), and an Axe and other battle field litter. Two extra road wheels are included in the kit and they can be installed in the storage box on the left side of the vehicle. There are two very well done figures, one sitting and one standing. These can be painted carefully to look like tank crewmen, adding much to the realism. Zimmerit anti-magnetic mine paste can also be added where required.

As some small notes, I might add that the Support Rollers are of the late all-steel variety, although the Rear Idler wheel is of the early style. The Drive Sprocket is of the late style also. The tracks are very well done. All-in-all, at a price of \$3.00, the kit is an excellent buy, and has a lot of possibilities from the standpoint of chassis alone, with the 3.7cm Flakpanzer "Ostwind" and the 2cm Flakpanzer "Mobelwagen" being but two examples that can be converted.

The M-10 "Wolverine"
by Jim Garrison

In the spring of 1942, it was clear to those concerned that the U.S. Army's T12/M-3 Tank Destroyer, a 75mm M2 Gun mounted on a M-3 Halftrack, was totally inadequate. The main reason for concern was that the "Fast Tank Destroyer Project" was lagging behind and it looked as if U.S. troops would be going into battle with an obsolete Tank Destroyer. The appearance of the 105mm Howitzer Motor Carriage M-7 "Priest" presented an interesting alternative. A 3" antitank gun had just been developed, using the breech of the 105mm Howitzer and the barrel of the 3" antiaircraft gun. This 3" gun was experimentally fitted into the chassis of the M-7 'Priest', but the design was judged inadequate. The same 3" gun was given better mobility by installation in the chassis of a M2A2 Medium Tank, using a turret similar to that of the M-6 Heavy Tank. This was designated the T35. The project was rejected because of excessive height.

The next step was to design a new superstructure and turret for the M2A4 chassis. This prototype was designated the T35E1, and it went into production as the M-10 Gun Motor Carriage. In September 1942, to speed up production, the M-10 superstructure was fitted to the M4A3 chassis, and this went into production in October 1942 as the M-10A1. The production of M-10's came just in time, and they were able to see combat with U.S. forces in Tunisia.

When production ceased in December of 1943, 6,706 of the M-10 or M-10A1 Tank Destroyers had been produced. The first production models suffered from an unbalanced turret, due to the weight of the gun and extended long barrel. This problem was remedied by the addition of a counter-weight on the rear of the turret. These counter-weights could be added in the field, or at the factory. There were at least three variations on styles of these counterweights.

The British Army received many M-10 Gun Motor Carriages, which they designated as the "Wolverine". A good many of these M-10's were modified by the British, by replacing the 3" gun with the famous 17-pound gun, for which the turret of the M-10 was ideally suited. This British conversion was known as the "Achilles".

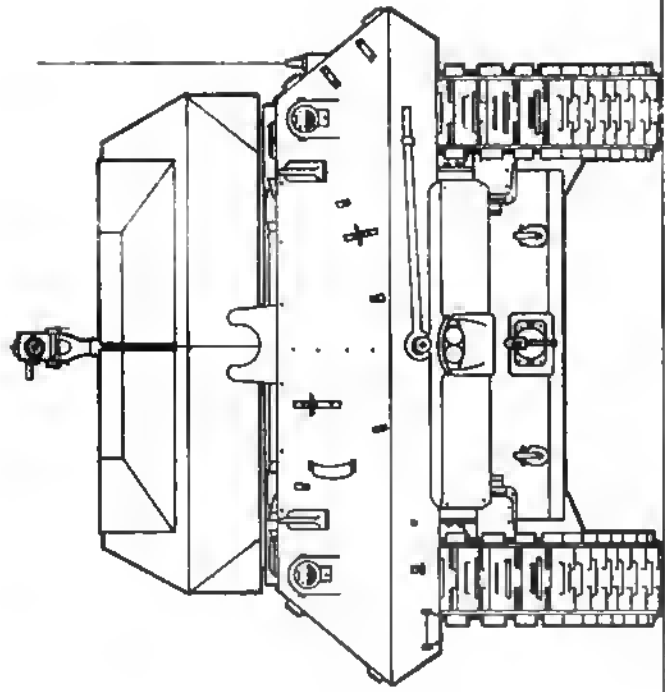
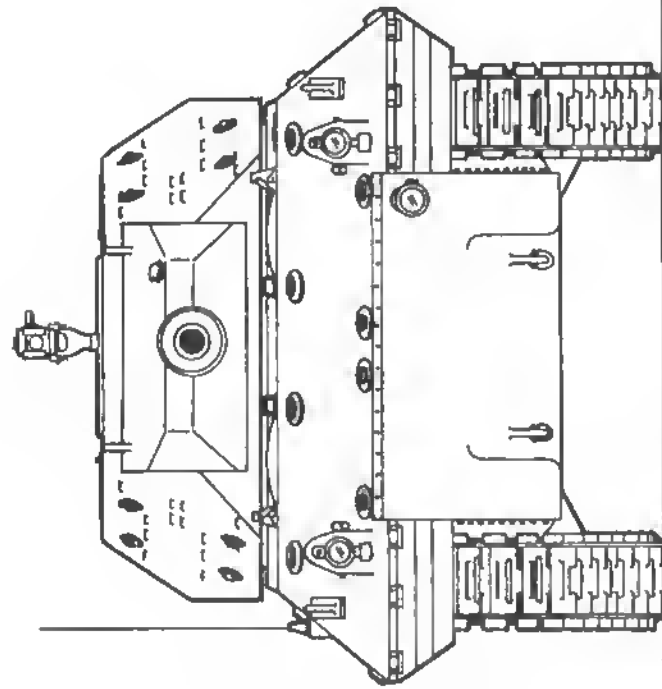
Turretless M-10's were used to tow both 8" and 240mm Howitzers, being designated as the "Full Track Prime Mover M-35".

An improved version of the M-10 was being developed as the T72, but this project was cancelled, as the M-10's in service were being replaced by the M-18 "Hellcat" and the M-36 Gun Motor Carriage.

While the M-36 Gun Motor Carriage will be the subject of a later article in the AFV-G2, it should be briefly mentioned as the logical successor to the M-10. The initial models of the M-36 mounted a 90mm antitank gun, on the superstructure of the M-10. The gun was accommodated in a completely re-designed turret, featuring internal counter-weights and a more rounded shape to deflect enemy projectiles.

In many ways, the M-10 Gun Motor Carriage was inadequate. The hull armor was very thin, and easily penetrated by almost every German antitank weapon. The open-topped turret was popular with crews, since it provided an easy method for getting out of the vehicle when it "brewed-up" or burned, as it was very prone to do when hit. M-10 crews became experts at seeking good defensive terrain, and no one was stupid enough to engage a German tank in the open, when the enemy vehicle had a chance of firing back. It was much preferred to fight from ambush, firing from hull-down positions where the earth cover could improve over the thin hull armor. It can thus be seen that Tank Destroyers could not be used in the offensive role, since this meant the almost certain loss of several vehicles.

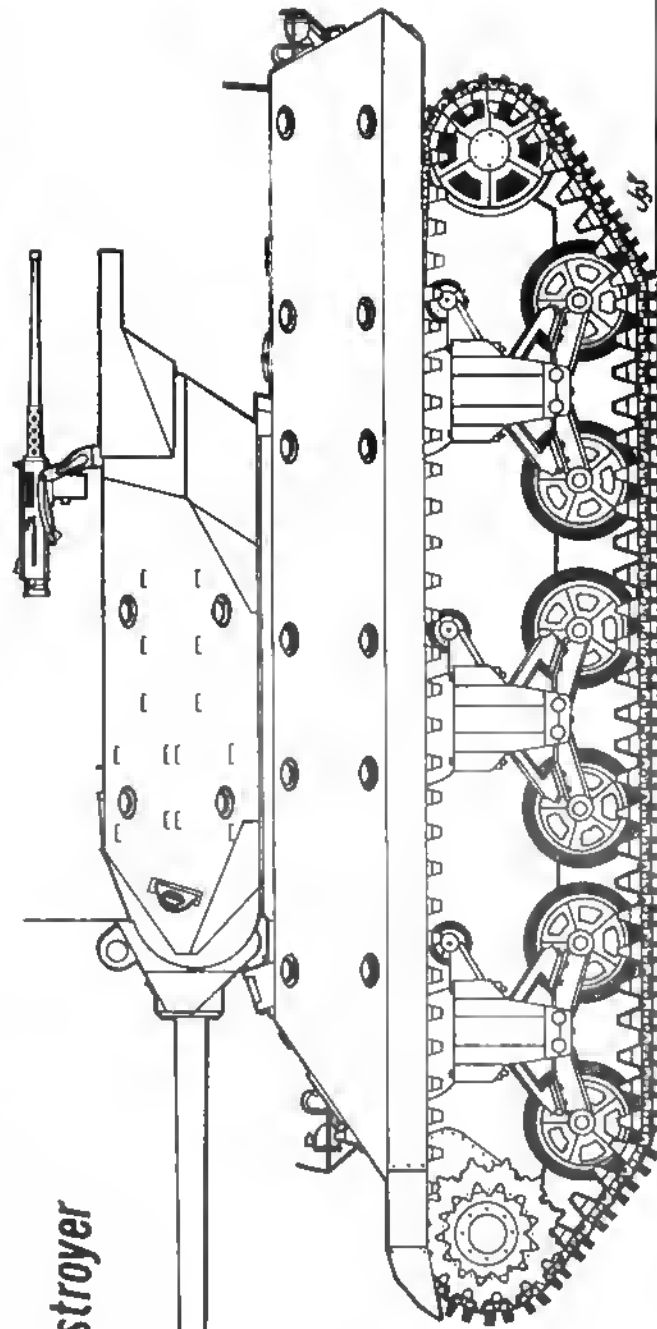
The 3" gun was well liked by Tank Destroyer crews. It was very accurate, and had good penetration out to a respectable range. On many occasions, it was used as a "sniping" weapon, to shoot at enemy forward observers in church steeples, often at ranges of over one mile from the gun. Its accuracy was such that a second or a third round was not often required. When the 76mm gun became standard in the M-4 Sherman series, the 3" gun was officially obsolete in the Tank Destroyers. The M-10 had served the Allies well, being the only Tank Destroyer remotely capable of serving against German armor at the time it was introduced.



M-10 Tank Destroyer

*drawn by:
J. Steuard*

scale: 1:32



The German Light Tank Company in France, 1940
by Jim Steuard

The German Panzer arm-of-service had not really been ready for the attack on Poland in September of 1939. Obsolete equipment such as the Panzerkampfwagen I. was still in use as a main battle tank; tank resupply and maintenance were still in their infancy, after the German experiences in the occupation of Austria. By 1940, the situation had not improved to any great extent. The Panzer arm was still using tanks that had been designed as training vehicles. German tankers were still refueling their vehicles with five gallon containers and there was no bulk fuel source, other than enemy gas stations.

The German Wehrmacht attacked France with ten Panzer-Divisionen, and these 10 divisions were not standardized as to a single organization. Thus, any attempt to discuss the organization of a tank company has to dealt with in terms of a specific division, and in some cases, a specific tank regiment.

Panzer-Divisionen 1, 2, and 10 were organized with a Panzer-Brigade of two Panzer-Regiments; they were equipped with a total of 276 tanks of German manufacture. Panzer-Divisionen 3, 4, and 5 were also organized with a Brigade of two Regiments, but each of the four tank battalions had one additional company; these divisions had a total of 324 tanks, also of German manufacture. Panzer-Divisionen 6, 7, and 8 were differently organized, with a single Panzer-Regiment of three battalions; they had a total of 218 tanks of mixed Czech and German manufacture. The one remaining Panzer-Division, the 9th, was organized with a single Panzer-Regiment of two battalions, with 229 tanks. The tank company that we will examine with some detail was from Panzer-Division 1., being from Panzer-Regiment 2., although both regiments were identically organized.

In addition to the Panzer-Brigade which carried the divisional number, Panzer-Division 1. was organized with an Infanterie-Brigade with a single motorized Infanterie-Regiment, consisting of four regular infantry battalions and a motorcycle battalion. There were also four battalions in an Artillerie-Regiment, an Engineer Battalion, an Antitank Battalion, and additional divisional support units such as Signals, Medical troops, etc.

Each of the two Panzer-Regiments were organized with two battalions as indicated above. The Panzer-Abteilung (or Battalion) was organized with two light and one medium tank companies. The light companies of the I. Abteilung were numbered "1" and "2" while the medium company was numbered "3". The similar companies of the II. Abteilung were numbered "4", "5", and "6".

The Light Tank Company, our subject for this month, was usually commanded by a Hauptmann (or Captain). There were a total of 70 men in the company, with 5 officers, 57 non-commissioned officers and only 8 enlisted men. Of course, the actual number of NCO's would vary, depending on the length of service of the men; it was extremely rare in the pre-war German Army to promote a man before a lengthy "trial" period.

The Light Tank Company was organized with a small Headquarters Section of two Panzerkampfwagen III. tanks, mounting 3.7cm cannons. These two vehicles allowed the Company Commander to lead and control his unit from the protection of an armored vehicle. There were four Platoons in the Company, with each being led and controlled by a Leutnant (or 2nd Lieutenant) or Oberleutnant (1st Lieutenant). The First and Second Platoons were formed with light Panzerkampfwagen II. tanks. These vehicles were actually obsolete, mounting only one machine gun and one 20mm gun which was inadequate against anything heavier than a truck. These tanks were primarily used as reconnaissance vehicles, to scout-out the enemy's location so that the heavier tanks could then engage them. There were five tanks in each of the First and Second Platoons and these tanks were crewed by three NCO's each.

The Third and Fourth Platoons were equipped with the Panzerkampfwagen III. tanks, which mounted the 3.7cm tank gun. This weapon was also obsolete, and German tankers were to have considerable trouble getting this weapon to penetrate French tanks such as the Char B. There were three tanks per Platoon, each crewed by five men, all NCO's except the enlisted Loader. In theory, the Panzerkampfwagen III. tanks were to offer fire-support for the lighter tanks of the First and Second Platoons; in actuality, the Company often had to call for fire-support from the medium tank companies equipped with the early Panzerkampfwagen IV. mounting a short 7.5cm L/24 gun.

In France, the inadequate vehicles and weapons were compensated for by the excellent training of German panzer-personnel, who had undergone considerable amounts of exercise in both attack and defense with armored vehicles. This training and the better overall organization gave the edge to the attacking German Wehrmacht.

LEICHTE PANZER-KOMPANIEFRANCE 1940HEADQUARTERS SECTION

/ NCO Tank Commander
/ NCO Gunner
/ NCO Radioman
/ NCO Driver
/ EM Loader

/ DFF Company Commander
/ NCO Gunner
/ NCO Radioman
/ NCO Driver
/ EM Loader

FIRST PLATOON

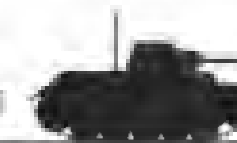
/ NCO Tank Cmdr.
/ NCO Gunner
/ NCO Driver

/ NCO Tank Cmdr.
/ NCO Gunner
/ NCO Driver

/ NCO Tank Cmdr.
/ NCO Gunner
/ NCO Driver

/ NCO Tank Cmdr.
/ NCO Gunner
/ NCO Driver

/ OFF Platoon Leader
/ NCO Gunner
/ NCO Driver

SECOND PLATOON

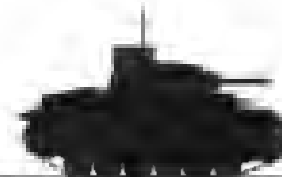
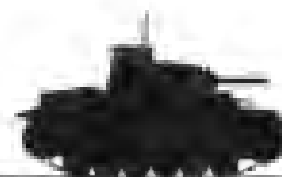
/ NCO Tank Cmdr.
/ NCO Gunner
/ NCO Driver

/ NCO Tank Cmdr.
/ NCO Gunner
/ NCO Driver

/ NCO Tank Cmdr.
/ NCO Gunner
/ NCO Driver

/ NCO Tank Cmdr.
/ NCO Gunner
/ NCO Driver

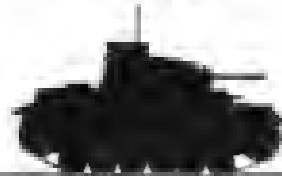
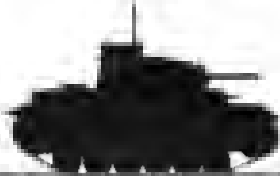
/ DFF Platoon Leader
/ NCO Gunner
/ NCO Driver

THIRD PLATOON

/ NCO Tank Commander
/ NCO Gunner
/ NCO Radioman
/ NCO Driver
/ EM Loader

/ NCO Tank Commander
/ NCO Gunner
/ NCO Radioman
/ NCO Driver
/ EM Loader

/ OFF Platoon Leader
/ NCO Gunner
/ NCO Radioman
/ NCO Driver
/ EM Loader

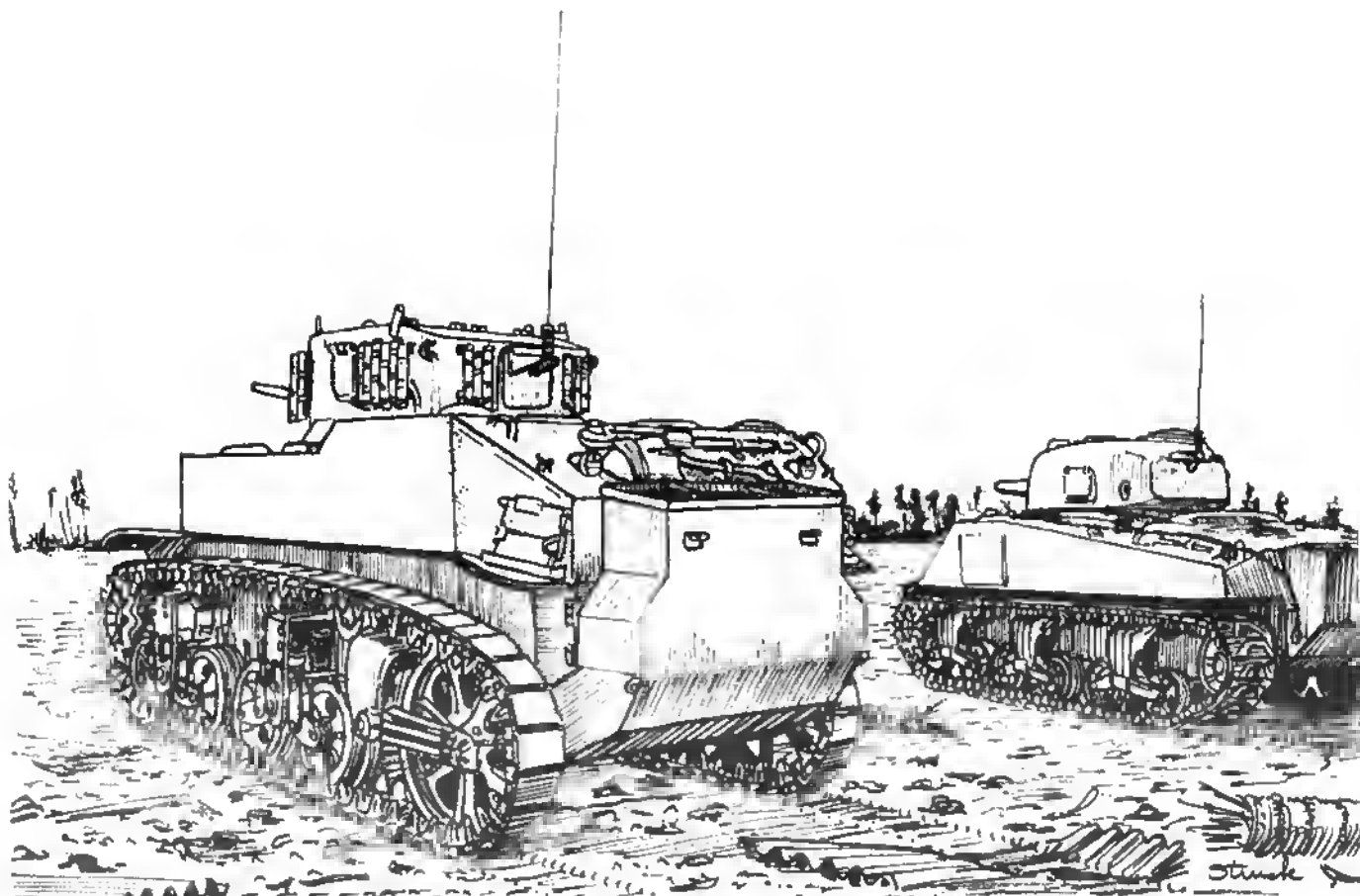
FOURTH PLATOON

/ NCO Tank Commander
/ NCO Gunner
/ NCO Radioman
/ NCO Driver
/ EM Loader

/ NCO Tank Commander
/ NCO Gunner
/ NCO Radioman
/ NCO Driver
/ EM Loader

/ DFF Platoon Leader
/ NCO Gunner
/ NCO Radioman
/ NCO Driver
/ EM Loader

Jgs-70



Marine Tanks in the Pacific - Part VII.

by Joe Struck

On July 1st, the long delayed attack on Garapan was resumed by 2nd Marines and Company C, 2nd Tank Battalion. Tanks and riflemen moved through the rubble. Hardly a building was intact in what had once been a city of fifteen thousand. The Marines encountered only small arms fire, but Shermans fighting in the foothills had it more difficult. They lumbered clumsily into positions from which they blasted Japanese targets with their 75's. Sugarloaf Hill, the most prominent feature, was assaulted by Marines, who stormed its steep slope and then descended on Garapan from the flank. The city was cleaned-out on the next day. Second Division Marines began moving down from the mountains, with tanks leading them down the last hills to the sugar cane fields below. The Shermans flushed and chased Japanese from their foxholes and Marine riflemen fired at those who the tank machine-gunners missed. Tanks ranged freely over the easier terrain, and the advance swept rapidly forward. Tankers continually rescued wounded Marines who had fallen on open fields exposed to enemy fire.

Capt. Edward Bale Jr., commanding Company A, 2nd Tanks, suggested a night tank attack on a Japanese strong point on a hill that had been holding-up the advance of the 8th Marines. Under star shell illumination, Shermans used their headlights, advanced and fired at enemy positions on the hill. Light flame tanks, close behind, dashed forward and roasted the Japanese with streams of flame. The tanks then withdrew from the smouldering hill and returned to Marine lines.

The Marine tank-infantry advance could not be stopped and the Japanese organized defense deteriorated rapidly. On July 3rd, tanks assisted the final clean-out of defenders on Tanapag harbor. Shermans plastered pill-boxes, while flame-thrower tanks burned the defenders out. "Double-Hill" and "4th of July" blocked the advance of the Fourth Division on July 3rd. Tanks could not move closer than a thousand yards, because all approaches to the hill were mined. Several assaults without tanks failed. The hill finally fell to a renewed assault on July 4th. Marines resumed the advance and tanks were sent forward when they ran into heavy enemy fire. Two tanks became separ-

ated, were knocked-out and then besieged by Japanese soldiers. Marine riflemen were sent to rescue them. The crews abandoned the vehicles and returned safely.

By July 5th, the Japanese held only the northern third of the island. On July 7th, the Fourth Division had pushed far ahead of the 27th Division. Thirteen tanks of Company C, 4th Tanks, spearheaded this drive. One of the tanks acted as a naval gunfire spotter. The assault units were glad to have the tank's support when two Japanese tanks attacked. Taken under fire by the Shermans, the enemy armor quickly withdrew. The Shermans, in turn, were rushed by a number of suiciders that were cut-down by riflemen before they could attach their magnetic antitank mines.

That night, the 27th Division was hit by the last big Banzai attack. Thousands of Japanese swept over the ill-prepared Army units, and over Marine artillery positions beyond. By sunrise, after a night-long attack, the Tanapag plain was covered with Japanese dead.

The Second Division came out of reserve to mop up during July 8th. Marines advanced as skirmishers behind 2nd Tanks and had to be constantly alert, especially for wounded Japanese who could still fire one more shot or throw one more grenade. This happened to Sergeant Grant Tinnerman. He blocked the Japanese hand grenade with his body, and prevented it from falling through his open turret hatch among the crew inside, or injuring Marines around the tank. He was posthumously awarded the Medal of Honor.

The 4th Tank Battalion led the final drive to clear the island. On July 9th, at Marpi Point, Saipan's northernmost end was reached after heavy fighting, and the island was declared secured.

TINIAN:

2nd and 4th Tank Battalions now prepared for Tinian, which lay a few miles south of Saipan. On July 24th, the Second Marine Division feinted invasion off the best, but fortified, southwestern beach, while the Fourth Division landed on two narrow northwestern beaches. Assault troops began fanning out, sweeping aside light Japanese resistance.

The 4th Tanks debarked from their landing craft at the edge of the reef, and waded the hundred yards to the beach. The tanks then dropped their water-proofing gear and moved inland directly to the regiments that they were attached to for the operation. Company A and 1st Platoon, Company D (Flame) were attached to the 25th Marines; Company B and 2nd Platoon, Company D to the 24th Marines; and Company C and the 3rd Platoon, Company D to the 23rd Marines. Two Japanese light tanks opposed the Marine advance, and they were quickly destroyed by the Shermans. Marines moved inland over a mile before setting-up defensive positions. The battlefield was again disturbed by explosions, and Marines were surprised to see bodies of Japanese, committing suicide, being blown-up fifteen feet into the air. Later, the Marines mopping-up found that half of the attackers had carried magnetic antitank mines to destroy the Marine tanks.

The Second Division landed, moved behind the Fourth, cleaned-out the northern end of the island, and then swung abreast on the left flank. The 2nd Tanks landed during the first three days and most of them joined the fighting on the second day. Sherman companies and flame tank platoons were assigned to support the three infantry regiments.

The drive south down the island now got going; the tank-infantry attack moved forward rapidly with Marine riflemen deployed as skirmishers following closely behind the Shermans spread out across the entire island. Tinian's sugar cane fields were almost perfect tank terrain, and enemy resistance was sporadic. A few tanks were lost to magnetic antitank mines, but tankers had covered all flat surfaces of their tanks with oak planking which nullified the mine's effect. Operating with one tank company per infantry regiment gave the tankers a chance to rest, and maintain and repair their tanks while their regiment was in reserve.

On July 29th, the sixth day of the attack, most of Tinian had been over-run. The Marines reached the high ground overlooking Tinian Town, and the valley running across the island. Beyond lay the cliff line where most of the remaining Japanese had been compressed and cornered. On the next day, behind an artillery preparation, the Marines and their supporting tanks moved down into Tinian Town. Shermans and amphibious tanks shelled while light flame tanks moved close enough to stream their fire. The tanks came under Japanese artillery fire, and one Sherman was knocked-out. The Japanese were pushed back across the valley and up the south slope to the cliffs. The Marine tanks were stopped by minefields of the last Japanese defense line. The light flame tanks were used to mop-up Japanese stragglers in the thickly covered undergrowth.

A Sherman of Company C received six hits in rapid succession from a hidden 47mm antitank gun. The damaged tank fired smoke and moved back. After the area was pounded, the antitank gun

The Soviet Tank Brigade - Type 1944

by W. Larson



As the Second World War progressed, the Soviet Army gradually developed better and more efficient armored vehicles, culminating in the excellent T-34/85 tank, equipped with an 85mm cannon capable of defeating almost any German armored vehicle. The Soviet Tank Brigade, equipped with this vehicle, became the heart of the Soviet offensive.

The nucleus of the Soviet Tank Brigade was the six Tank Companies, each equipped with ten tanks. These ten vehicles were organized into three Platoons of three tanks each, with the remaining tank for the use of the Company Commander, usually a Lieutenant or 1st Lieutenant. The Tank Companies were also equipped with Armored Recovery Vehicles for towing or pushing battered tanks back to the Brigade Maintenance & Repair Company. Two Tank Companies with a small combat headquarters, consisting of one tank and a small combat staff, formed a Soviet Tank Battalion. With twenty-one tanks, this Tank Battalion was slightly stronger than an equivalent German Tank Company. The Soviet Tank Brigade had a total of 65 T-34/85 tanks, and was about the strength of an American Tank Battalion.

The Tank Brigade also included a Motorized Infantry Battalion, equipped largely with the "burp" gun, or 7.62mm PPSH41 Sub-Machine Gun. This Battalion had three Sub-Machine Gun Companies; these three units were generally assigned to the Tank Battalions (one per Battalion) as "escort" troops during combat. The companies were "motorized" only to the extent that the troops rode on the T-34 tanks of the Tank units. The Infantry Battalion was reasonably supplied with supporting units; there was a Heavy Machine Gun Company with four of the excellent 7.62 mm Goryunov weapons, mounted on a wheeled chassis for better mobility. In addition, there was a Mortar Company with six 82mm Mortars, and an Anti-Tank Gun Company (or Battery) with four 45mm AT Guns (sometimes replaced with 76mm Guns).

The Tank Brigade Headquarters was staffed and equipped to compliment the offensive power of its T-34/85 tanks. The Headquarters Company had a small Supply Section, a Signal Platoon and a Chemical Warfare Platoon organically assigned, and the Headquarters exercised control over a Reconnaissance Platoon, an Anti-Tank Gun Battery, an Anti-Tank Rifle Company and an Anti-Aircraft Machine Gun Company, as well as an Engineer Platoon and a Medical Platoon. In addition, there was the previously mentioned Maintenance & Repair Company.

The small Reconnaissance Platoon was about the size of an American Reconnaissance Squad, being equipped with three of the small BA-64 Armored Cars. It was used for general scout duties, as well as route reconnaissance, working with the Engineer Platoon which often furnished the dismounted scouts for the Brigade.

The Anti-Tank Gun Battery was equipped with four of the excellent 76.2mm AT Guns that were especially respected by the Germans. These guns had excellent velocity and good penetration. They were especially low in silhouette and could be easily hidden.

The Brigade Anti-Tank Rifle Company was equipped with eighteen of the 14.5mm AT Rifles. These weapons were usually hidden in front of the Soviet defensive positions, in a similar manner to a sniper. They were used to pick-off and harass unwary German tanks. These rifles were of approximately .60 caliber, firing an armor-piercing cartridge. They were as punishing to the shoulder of the shooter as to the enemy tank. The 14.5mm cartridge is currently used as an anti-aircraft weapon cartridge in Viet-Nam.

The Anti-Aircraft Company was equipped with nine of the 12.7mm Heavy Anti-Aircraft Machine Guns, now commonly used in Viet-Nam. These guns are of approximately .51 caliber, and fire from a belt feed, similar to the .50 caliber Machine Guns of the US Army.

In combat, the Soviet Tank Brigade was assigned directly to a Corps, either a Tank Corps or a Mechanized Corps. There was no equivalent of a German Panzer Division, or an American Armored Division in the Red Army. While there were Infantry Divisions, all Russian Armored units were of Brigade or independent Regiment organizations. The Soviet Tank Corps usually consisted of three Tank Brigades and a Heavy Tank or Assault Gun Regiment, and thus ranked at about the same strength as a reduced strength German Division.

Sturmgeschütz-Brigade 243.

by Jim Steuard



*Tactical Symbol
Sturmgeschütz-Brigade
243. (up to Stalingrad)*

Sturmgeschütz-Brigade 243. was formed as an "Abteilung" (or Battalion) on 10 May 1941 at the Old Camp at Jüterbog, the German Army Artillery School. The Brigade chose the emblem of an armored knight as the tactical marking; this emblem is illustrated at the left. The first commander of the Abteilung was Major Hesselbarth. On the eve of the invasion of Russia, the only partially trained unit was alerted for movement to the front. During the first days of the attack, the Brigade was stationed near Przemysl, minus the 1. Batterie, which was assigned directly to the 1. Gebirgsdivision (1st Mountain Division).

In the period from June 22nd through August 26th, the Brigade fought through the Polish-Russian frontier defenses, marched on the fortress of Lemberg and was directly involved in the fighting at Tarnopol. The defenses of the "Stalin Line" were finally breached by the Wehrmacht, and Sturmgeschütz-Brigade 243 led the assault.

The 1. Batterie, still attached to 1. Gebirgsdivision, was especially involved in heavy fighting; many of the battery's officers were killed or wounded in combat. On August 1st, Oberwachtmeister (or Sergeant) Ernst Alex of the 1. Batterie was the first Brigade member to receive the Knight's Cross of the Iron Cross for personal bravery and leadership under fire. On August 18, 1941, the 1. Batterie was ordered to rejoin the Brigade, after the hard fighting at Kirovograd. However, it took the 1. Batterie eight days to march the 600 kilometers that now separated the two units. From this time on, the 1. Batterie used a different tactical symbol, that of the mountain "Edelweiss", borrowed freely from the 1. Gebirgsdivision.

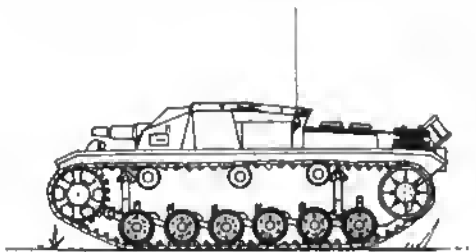
In the period of time from late August until early October, Sturmgeschütz-Brigade 243., now known as the "Iron Knights", was involved in bitter fighting against "Guards" units of the Soviet Army. These "Guards" were the elite of the Red Army, and they neither gave or asked for surrender. The fighting often was hand-to-hand, with dismounted gun crews assisting other vehicles, since the Sturmgeschütz III. assault guns were especially vulnerable to determined infantry attack. In October, the Brigade fought at Briansk and Orel, and after a short rest, the attack on Moscow started. But, winter also intervened.

With temperatures dropping below -44 degrees, and a Soviet counter-offensive starting, the Brigade fought through the winter, with hard defensive battles in the blowing snow against superior enemy numbers. By January 1942, the Brigade had moved back to Livni, and by February, they were back to Maloarchangelsk. The three batteries were down to less than three guns apiece.

In early March, Sturmgeschütz-Brigade 243 was relieved from combat, and reassigned as Corps-Reserve for the L.V. Armee-Korps. They received replacement personnel and 21 new assault guns, and were assigned the mission of training for the up-coming summer offensive.

On June 28th, 1942, the German Wehrmacht launched its second offensive into the Soviet Union. Sturmgeschütz-Brigade 243. participated in the breakthrough the Soviet lines near Tim; losing four assault guns of the 2. Batterie, who led the assault. The Soviets counter-attacked, forcing a halt, with large numbers of massed T34's and "Guards" units. The Brigade suffered high losses in the ensuing fight, including the Battery Commander of the 3. Batterie, Oberleutnant (or 1st Lieutenant) Höfer. It was evident that the short-barreled early Sturmgeschütz III. assault guns were inadequate against the T-34 tanks.

On July 7th, 1942, the Brigade was pulled-out of the fighting, and sent as reinforcements with other units to support the continuing German attack into the Caucasus mountains of southern Russia. The Brigade, weakened by the previous fighting, marched over 800 kilometers to join its new command, arriving at the Don River by July 30th. With a change in orders to attack towards Stalingrad, the 14. Panzer-Division, the 24. Panzer-Division and the 29. Infanterie-Division (Mot.), with Sturmgeschütz-Brigade 243. attached, moved into the attack on Kotelnikovo on August 3rd, aiming towards Stalingrad itself from the south. However, the long motor marches and hot summer had produced casualties in both men and vehicles. The Brigade (and three divi-



sions) was seriously understrength. Replacement vehicles were slow to arrive, but the 2. Batterie managed to acquire new Sturmgeschütz III, 's with the long barrel 7.5cm gun that was so badly needed to cope with the Russian T34's. The long barrel gun fired Armor-piercing shot projectiles at a high velocity, instead of the lower velocity of the original 7.5cm L/24 gun which had to use shaped-charge ammunition against enemy armor.

On November 19th, 1942, the Brigade attacked with supporting infantry towards the Soviet tank production center at Krasnoarmeisk, where T34's were being driven off the assembly lines into combat. The German attack was repulsed with heavy losses, when the attacking troops ran into Soviet 85mm and 100mm anti-aircraft guns, firing from concealment.

After two months of fighting in the city of Stalingrad, on January 10th, 1943, the Russian offensive to relieve the city began. By this time, the Brigade had only one operational Assault gun left. The majority of the Battery personnel were fighting as infantry. They had been living on black bread and horsemeat, when such food was available. By the end of January, both of these items of food had vanished, and the men were existing on thin soup; what men that there were left. Today, there are only three Brigade survivors left from the Stalingrad epoch; all are members who were evacuated from the city in the last planes to leave, after being wounded.

In the Spring of 1943, Sturmgeschütz-Brigade 243, was reformed in Germany, under the command of Hauptmann (or Captain) Maier. Hitler had specifically ordered that the units lost at Stalingrad were to be reformed with all haste. In May 1943, the Brigade moved east again, fighting on the Southern Sector of the Russian Front. In September 1943, the Brigade participated in the fighting at Mius, where they suffered heavy losses from the attacking Soviet tanks. On October 8th, the Brigade was mentioned in the official High Command reports, for the successful defense of Saparoshje. The retreats continued, however, and in the next year, the Brigade fought rear-guard actions at Nikopol, at Krivoi-Rog, across the Dnjepr River, at Nikolajev and then across the Bug River, where the attack on Russia had started two and one half years before.



*Tactical Symbol
Sturmgeschütz-Brigade
243. (after Stalingrad)*

In the middle of April 1944, the Soviet armies partially surrounded Heeresgruppe (or Army Group) Südukraine (or South Ukraine), and the Brigade was almost totally decimated in the fierce fighting when the Army Group attempted to break out of the Russian trap. Most of the Brigade personnel were killed or captured, and a bare handful escaped on foot, after the last operational assault gun was destroyed. For the next few months, the Brigade existed only as scattered groups of infantry.

In the fall of 1944, the scattered survivors of the Brigade were assembled at Altengrabow, where Sturmgeschütz-Brigade 243, was reformed for the third time. After receiving new equipment and training, the Brigade moved west to assemble for the German attack in the Ardennes. When the German offensive started, the Brigade was used as an armored spearhead. The attack initially succeeded, but with the clearing weather, the Allied fighter aircraft soon proved too much for German armor. The Brigade suffered heavy losses from air attacks, as well as from American armor. In the middle of January 1945, Sturmgeschütz-Brigade 243, as a part of Heeresgruppe Model, was moved east again. However, the vehicles lost in combat had not been replaced, so the Brigade was again serving as infantry, with a very few operational assault guns. Finally, in March 1945, the Brigade received 40 new assault guns, bringing them up to full combat strength. The Brigade was now under the command of Hauptmann Rübig. The 1. Batterie was stationed near Schönebeck, fighting against the Americans, while the 2. Batterie and the 3. Batterie were in Potsdam. These two batteries were soon ordered to move against Soviet tank forces near Bukow-Straussberg. They were combined with elements of Sturmgeschütz-Brigade 245, operating as a reinforced Brigade. On the next day, however, this combination was broken-up, and all batteries of Sturmgeschütz-Brigade 243, were reunited, being now assigned to the newly created Armee Wenck, which was assigned the task of liberating Berlin. The Brigade was made a part of the Division "Theodor Körner" which was made-up from various school units of the German Army, including Lehr-Brigade-Schill, another assault gun unit. During April 1945, the situation grew more and more confusing daily. Finally, on the 7th and 8th of May, the Brigade crossed over the Elbe River and passed into American captivity, even though some of the personnel were given back to the Soviets as prisoners.

When the U.S. Army landed in France, they found heavy German armor in concentrations higher than they had encountered before. The obvious solution was more M-36 Tank Destroyers, with 90mm guns. The only problem was that M-36 production was already at its maximum limit. To fill this gap, two solutions were formulated. The first was the M-36B2, which was a M-10 Tank Destroyer fitted with the M-36 turret. The other solution was the M-36B1 "Jackson". This was the best armed and armored U.S. AFV until the appearance of the M-26 "Pershing" Heavy Tank. The M-36B1 had the armor of the M4A3 Sherman, combined with the 90mm antitank gun.

It was also the only U.S. tank destroyer with a hull mounted machine gun. It is the perfect weapon for the Allied wargamer who finds himself caught in an Ardenne situation and needed heavier forces.

For this conversion, we will need Roco's Sherman (Z-202) and the turret from the Roco M-36 (Z-206 or Z-205/206).

The "Jackson" had the 47 degree hull front plate of the later style Shermans, although this point can be ignored by the more liberal wargamer. To achieve the correct front hull plate, start by removing the driver's and co-driver's hatches, level with the top of the fight-compartment, extending back to the turret ring. Next, remove the hull ventilators and the driving lights. Now, reinforce the area beneath the joint between the differ-

ential cover and the hull front plate. After this reinforcement has set, cut a notch running across the front plate just above the joint with the differential cover (see Figure 1).

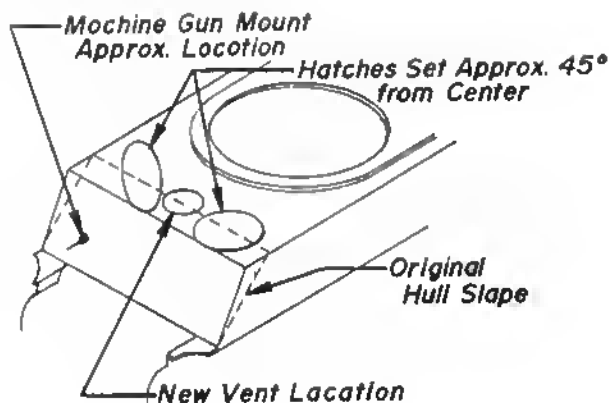
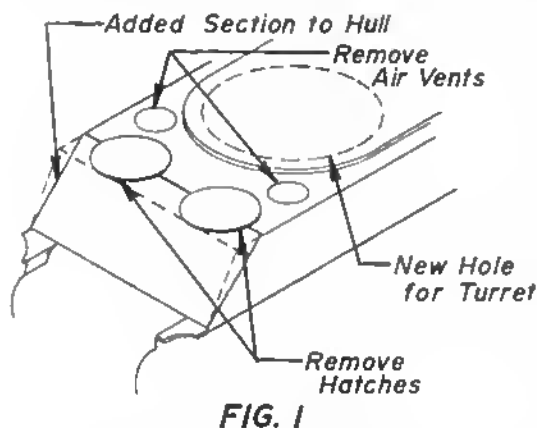
Cut a new plate from .020 sheet styrene, and place the bottom edge of this plate in the notch, and cement the top edge against the driver's and co-driver's compartments (see Figure 2). Fill the space between the new plate and the old hull front plate with "Green Stuff" and let dry. Now sand the 47 degree front plate smooth with fine sandpaper.

The driver's and co-driver's hatches can now be replaced with .010 sheet styrene hatches, in their original locations, but at an angle of 45 degrees from the original orientation, as shown in Figure 2. One of the ventilators can now be replaced between the new hatches.

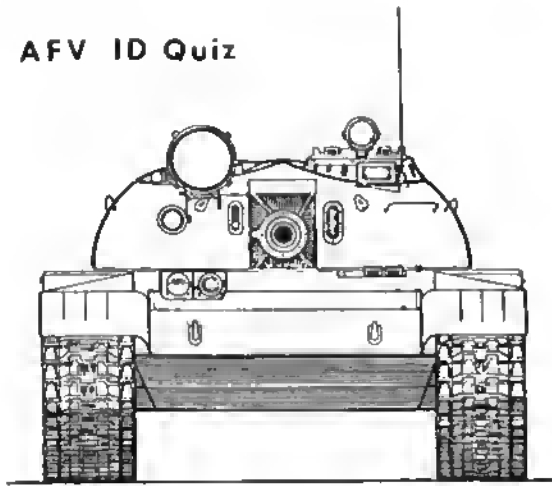
After the driving lights are remounted, cut a hole in the front plate, and mount the hull machine gun from an Airfix Sherman, or a Roco T-34 in the old machine gun position. This step will be referred to in future conversions on the Sherman chassis.

To finish the conversion, the M-36 turret must be mounted on the M4A3 hull. Enlarge the turret locating hole to accommodate the M-36 turret base, which is quite a bit larger. Be careful not to over-produce these Tank Destroyers, since the U.S. Army only had 183 "Jacksons".

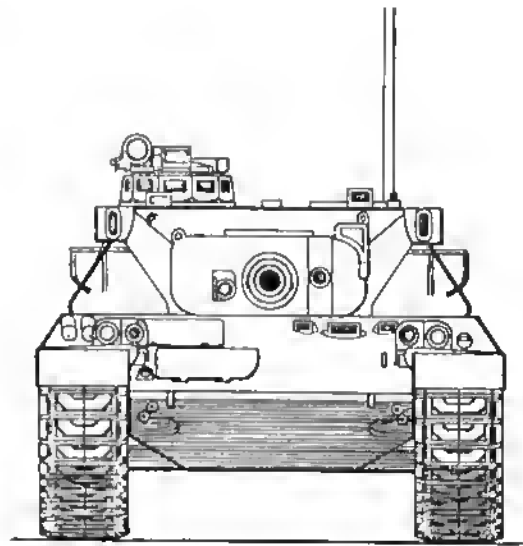
Finish off the conversion by applying a coat of Olive-drab paint, weathered with some earth colors around the tracks and hull bottom. A small amount of black can be sprayed around the rear deck and exhaust areas to simulate the grime usually found there. When finished with the paint, you'll have an excellent example of the M-36B1 "Jackson" Tank Destroyer.



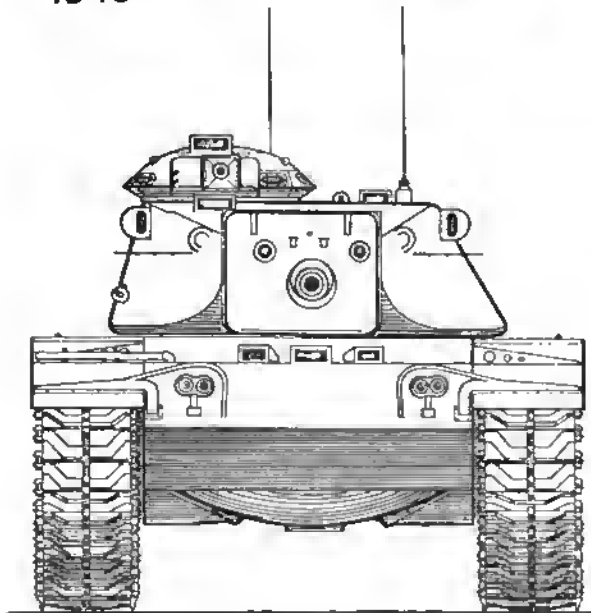
AFV ID Quiz



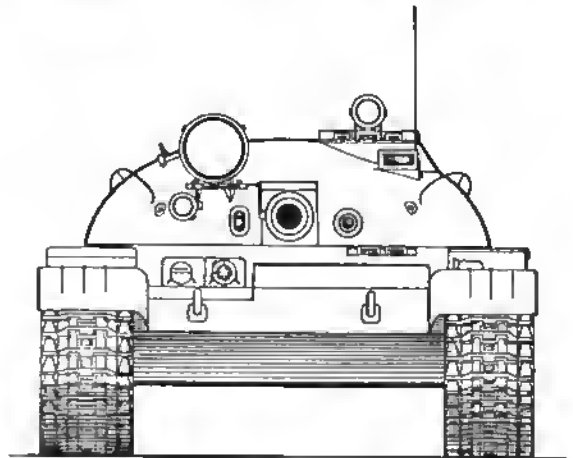
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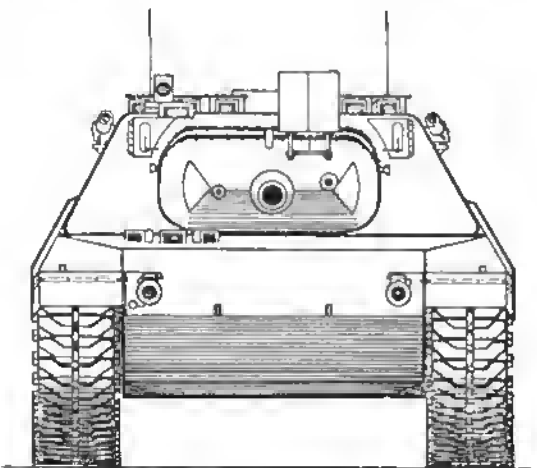
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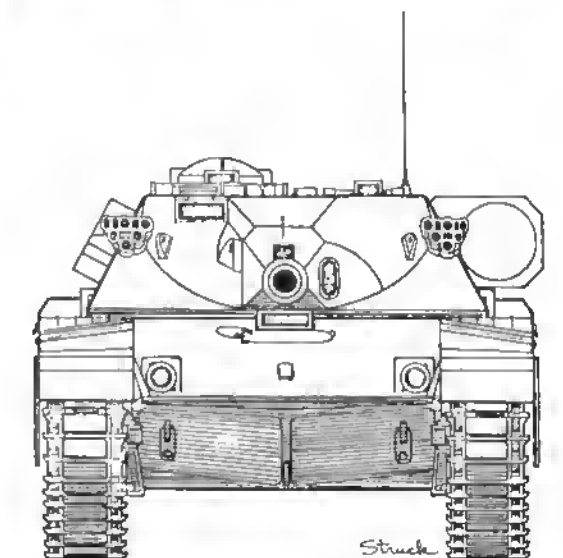
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AFV-ID QUIZ:

TANKS OF TODAY

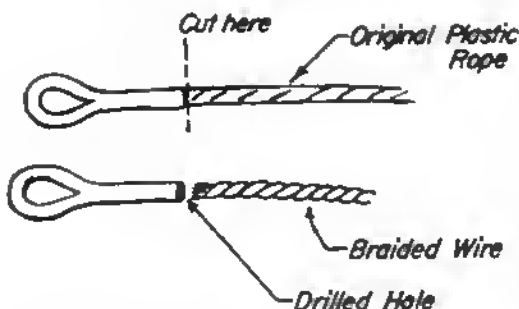
- ID-10: Soviet T54/55 Medium Tank; This tank can readily be identified as Soviet by its low silhouette, and elliptical-shaped turret with distinctive crest on roof. The differences between this tank and the earlier T-54 include the addition of Infra-red sighting devices and a bore evacuator at the end of the barrel. The armament consists of a D-10S 100mm gun, which is essentially the same gun previously mounted on the SU-100 SP Gun. The top speed is approximately 50-55 km/hr; and the total height of 2.25 meters makes this a formidable opponent, in the hands of capable crews.
- ID-11: French AMX-30 Medium Tank; The lowest of all western tanks, this vehicle is easily mistaken for the West German Leopard. The armament consists of one DEFA Type D 105mm gun. With a total height of 2.29 meters, and a maximum speed of 65 km/hr, this is an extremely mobile and powerful tank. The maximum armor thickness, however, is not as good as other medium tanks; in the area of 50mm maximum. Some of the distinctive features include a prominent cupola with a "spotting" machine-gun, and the side lenses for the range finder, much like the US M-60 Tank.
- ID-12: U.S. M-60A1E Medium Tank; The highest of all contemporary tanks, the M-60 is easy to recognize by its large trapezoidal-shaped turret with the large commander's cupola, capable of 360° rotation. The double-pinned track is typical of most American vehicles while the box-shaped gun mantlet distinguishes the A1E version of this tank. The armament consists of one British Vickers L7A1 105mm gun, one 7.62mm coaxial machine-gun and one 12.7mm (or .50 caliber) commander's cupola machine-gun. This vehicle weighs 46 tons and has a height of 2.98 meters. The M-60 has been in production since 1960 and the design, while not entirely successful, has introduced many major changes in US vehicles, such as Stereoscopic rangefinding, and a Diesel powerplant. Many of these design changes have been retro-fitted on the M-48 series of US tanks, making the older vehicles more useful.
- ID-13: Soviet T-62 Medium Tank; This vehicle is the newest of the T-54 series of tanks, from which it evolved. While keeping many of the same mobility components, the armament has been revised to a weapon of 115mm caliber. In this later version, the turret is more spherical and it lacks the "crest" on the roof of the earlier T-54. The bore evacuator has been moved back from the muzzle, and a different spacing of the road wheels aids in identification from the side. Most western sources would like to have more information on this new vehicle, since the actual characteristics are little known.
- ID-14: West German "Leopard" Medium Tank; The most modern of all western medium tanks, the Leopard was the result of an intensive German study to give a superior vehicle. While highly mobile, this vehicle possesses a very low silhouette with a large turret. Leopard has a number of identifying features, such as the raised rear deck over the engine, which is reminiscent of US vehicles, and the layout of the hull front, reminiscent of the Panzer IV. of World War II. Leopard mounts the British Vickers L7A1 105mm gun that has been judged as NATO standard, as well as a coaxial 7.62mm MG42/59. With a weight of 39.6 tons and a height of 2.38 meters, the Leopard is a thoroughly modern vehicle capable of 65-70 km/hr. top speed. Its armor is thinner than most Soviet designs but its manufacturers claim far greater mobility than its opponent vehicles.
- ID-15: British Chieftain; The heaviest of all western tanks, the Chieftain is also the slowest. Identity is easy, since this vehicle includes features that are typically British, and unlike any other vehicle. The turret, viewed from the front, resembles the French AMX-13. The tank mounts a large awkward looking searchlight on the left side, and there are clusters of smoke cannisters on both sides of the turret front. The main armament is a large 120mm gun which fires separate charge ammunition. Since the tank does not have a rangefinder, a 12.7mm "spotting" machine-gun allows for ranging. Weight is high at 51 tons; speed is slow at 40 km/hr. The Chieftain is a large, slow, but powerful tank.



Modeling Hints by Norb Meyer
Submit your modeling problems in writing
to the Editor.

Question: Well, I finally did it; I bought the Tamiya 1:25 scale Tiger I. kit. Do you have any suggestions, though, on what I can do about those "tow ropes"?

Answer: I will be the first to admit that those "tow ropes" are very bad. It is a shame too, but one cannot expect absolute perfection from Tamiya. It's a simple thing to improve the tow ropes. One of the first things that you must do is to cut off the cast portion, the

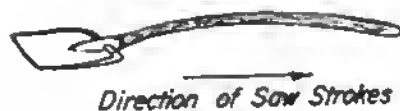


part that is supposed to be braided, from the eyelet section of the ropes. Discard the removed cast ropes, we will replace these. Next, sand down the ends of the eyelets that we have just removed.

Your next item on the agenda is to find some braided picture hanger wire. Be sure that it is braided wire.... You should look for about sixty-pound test wire, as this size is close to scale in 1:25th. Once you have found and purchased the wire, you will want to mount it in the eyelets. Use the same technique that you would use in drilling out the ends of tank gun barrels. Scribe an "X" on the end of the eyelet that was cut, then use a punch to press

a small dent in the exact dead-center of the "X" that you scribed. Then, take your Pin-Vise, and using a small drill bit to start with, drill out the eyelet sleeve about three-quarters of the way towards the loop or eye portion. After drilling with this small "starter" drill, you will want to slowly increase the size of the drilled hole, using various sizes of drill bits, until the braided picture wire just fits into the sleeve portion tightly. Then, using epoxy glue, cement the piece of braided wire into the sleeve, and set it aside for at least 24 hours to dry. There you have the tow ropes, looking far more accurate than those furnished in the kit.

While we are on the subject of the Tamiya Tiger I. kit, there is one other thing that you might want to do to spruce things up a bit. There is a scale shovel that fastens on the front of the tank just in front of the driver's visor. To me, the shovel handle made of plastic just doesn't look like the original wooden handle. So, let's fix it up. Remove the handle portion of the shovel



from the sprue tree, and clean it up. Once you have rounded it and removed the flash from the sides, take your Razor Saw and scrape the handle along the length with the saw held across the handle. This will give the appearance of wood grain to the handle. After scraping, paint the handle with Floquil "Foundation" and let the handle dry for approximately ten minutes. Now take some Floquil "Walnut Stain" and paint over the handle again.

Don't worry if some of the "Foundation" shows through the "Walnut Stain" as this will aid the appearance. Once this conglomeration has dried, you will have a wooden handled shovel that not only looks like a wooden handled shovel, but it will feel like a wooden handled shovel..... Good luck with your Tiger I.....

A. F. V. INQUIRY

The purpose of this section is to attempt to answer the questions of interested readers. Questions may be submitted by anyone, and should be sent to the Editor, at the address that appears on the cover. If the answer is urgently needed, please enclose a self-addressed stamped envelope.

Question: Were all of the German Sturmgeschütz III. Assault Guns used in Russia?

Answer: In answering this question, an explanation of German Assault Gun Units is necessary. There were two basically different types of units that used the Sturmgeschütz III. Assault Guns, based on the Panzer III. chassis, and mounting the 7.5cm L/48 cannon. The first of these types was the Division, more especially, the Panzer- and Panzer-Grenadier- divisions; Assault Guns were found in the divisional Panzerjäger- (or Anti-tank) Abteilung (or Battalion) of both types of divisions mentioned above. In addition, most Panzer-Grenadier-Divisions had one Battalion of Assault Guns which substituted for the divisional Tank Battalion. From the above statement, it can be seen that Assault Guns were used on all fronts, wherever a Panzer- or a Panzer-Grenadier-Division was employed, from late 1942 until 1945.

In addition to divisional units, the German Army also created non-divisional units equipped with the Sturmgeschütz III. weapons. These units, known as Heeres-Sturmgeschütz-Brigaden, (or Army-Assault Gun-Brigades), were assigned directly to Corps, or to Armies, and then were attached to combat divisions wherever urgently required. These Sturmgeschütz-Brigades have been the subject of our regular monthly features on German units. These units were primarily designed for service on the Eastern Front, where the large amount of open space, and the large number of enemy armored vehicles required a different type of anti-tank defense. With a few exceptions, as noted below, the Heeres-Sturmgeschütz-Brigaden were employed on the Russian Front. There were exceptions.....

A single Batterie of long barreled 7.5cm Assault Guns (known as Selbständige Batterie AFRIKA), equipped with six guns, was sent to North Africa in late 1942, and saw service in the Tunis area.

Two Batteries of short barreled, early Sturmgeschütz III. weapons were sent to Finland, at the request of the commanding general of the German forces operating in the northern sector. These two units, numbered 741 and 742, were not too effective, in the snow and timbered areas of northern Finland.

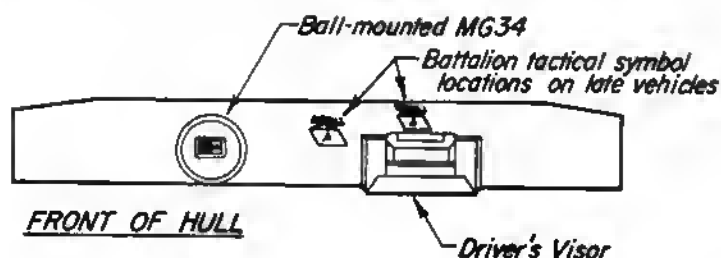
A number of Assault Gun Brigades were formed and trained in France, and were pressed into combat in June 1944, following the Allied landings in Normandy. In general, these units were quickly decimated by the Allied air-power. Two Luftwaffe (or German Air Force) Assault Gun Brigades were employed in the West in support of Fallschirmjäger- (or Paratroop) units. These two Brigades, numbered XI. and XII., were quite effective in the fighting in early 1945 against the US Army.

Probably the only "front" where non-divisional Assault Gun Brigades were not used was the Italian front, where the rugged terrain hindered the effective use of armored equipment on both sides.

The Sturmgeschütz III. was an effective weapon for both defense and offense. It provided anti-tank defense, with mobility, against the increasing amounts of Soviet armored equipment from 1942 until the very end in 1945. Although used on other fronts (Western, Italian, Africa and Northern), it was never employed there in the numbers that it was used in the East.

AFV-IDENTIFICATION QUIZ - ANSWER:

Our photograph in the May 1970 issue shows the Czech Praga T6 Artillery Tractor. This vehicle was manufactured by the Böhmisch-Mährische Maschinenfabriken A.G. in Prague. It was manufactured prior to the start of World War II. for the Czech Army, and production was taken-over by the occupying Germans. The vehicle was powered by a 90 horsepower gasoline engine, giving a top speed of 32 kilometers/hour. The fully-loaded weight of the T6 was 7320 kilograms, and it could pull a towed load of approximately 6000 kilograms. It was used by the Wehrmacht as a tractor for heavy artillery pieces, especially in Russia, where a tracked vehicle was essential for good off-road mobility.



began. The fields and hills of Tunisia were turned into a morass of mud reminiscent of Russia in the spring. The Tiger tanks did not dare to leave the roads, since they would immediately become bogged-down, and there were no heavy recovery vehicles in Tunisia capable of retrieving a Tiger. British 17-pound AT guns found the road-bound tanks to be excellent targets, and some sources indicate that the Germans lost fifteen of their heavy tanks to this AT

gun fire. Operation "Oxhead" was the last German offensive in North Africa. Allied pressure and strength were increasing daily, and the Germans were forced on the defensive. The few remaining Tigers were employed as a mobile counterattack force. However, it wasn't long until the surrender came in early May 1943.

Marine Tanks in the Pacific - Continued from Page 17.

hit another tank when it advanced a short time later. Three of seven hits penetrated the Sherman's armor. The gun's position was spotted this time, and it was smoked by the damaged tank. It was destroyed by another tank that moved around and attacked the gun from the rear. An examination of the emplacement revealed that the gun was protected by thick reinforced concrete on three sides and the roof, with only a small aperture that offered a narrow field of fire.

The enemy fire prevented engineers from clearing the Japanese minefields. A Sherman moved through the minefields to enfilade the defenses and break the impasse. It struck a mine that shattered its suspension and wounded most of the crew. Shermans shelled the Japanese positions while one tank went forward and rescued the besieged crew. The Japanese used the abandoned Sherman as a machine gun pillbox, and other Marine tanks had to blast it apart. It took many 75 rounds to do so. Artillery made the difference the next day, and Shermans and light flame tanks of both the 2nd and 4th Tank Battalions burst through the defenses at the base of the cliffs. The Marines fought to the top of the cliff defense line. The Japanese fought hard that evening to shove the Marines off, but they were badly beaten. At dawn on August 1st, the Japanese began to fall back, and tanks moved up the cliff road onto the southern plateau. Tanks now led the final drive, subduing isolated groups that were fighting stubbornly from caves. The Marines drove the survivors to cliffs on the southern point. Tinian was declared secured.

That night, however, the Japanese mustered one last attack, which was aimed at a CP. It ran into three Marine tanks bivouacked there, and the attackers were driven off. The tanks had trampled Tinian in eight days.
